

We claim:

1. 1. A method of signal transmission comprising the steps of:
 2. splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 is split unevenly such that the signal $s_1(a)$ has an associated power level greater than a power level associated with the signal $s_1(b)$;
 5. phase sweeping the signal $s_1(a)$ using a first phase sweep frequency signal to produce a phase swept signal $s_1(a)$; and
 7. phase sweeping the signal $s_1(b)$ using a second phase sweep frequency signal to produce a phase swept signal $s_1(b)$, wherein the phase swept signal $s_1(a)$ has a different phase from the phase swept signal $s_1(b)$.
1. 2. The method of claim 1, wherein the first phase sweep frequency signal phase sweeps the signal $s_1(a)$ in a direction opposite to a direction the second phase sweep frequency signal phase sweeps the signal $s_1(b)$.
1. 3. The method of claim 2, wherein a first phase sweep frequency associated with the first phase sweep frequency signal is identical to a second phase sweep frequency associated with the second phase sweep frequency signal.
1. 4. The method of claim 2, wherein a first phase sweep frequency associated with the first phase sweep frequency signal is not identical to a second phase sweep frequency associated with the second phase sweep frequency signal.
1. 5. The method of claim 2, wherein a first phase sweep frequency associated with the first phase sweep frequency signal is a fixed phase shifting rate.
1. 6. The method of claim 2, wherein a first phase sweep frequency associated with the first phase sweep frequency signal is a variable phase shifting rate.
1. 7. The method of claim 2, wherein a second phase sweep frequency associated with the second phase sweep frequency signal is a fixed phase shifting rate.
1. 8. The method of claim 2, wherein a second phase sweep frequency associated with the second phase sweep frequency signal is a variable phase shifting rate.

1 9. The method of claim 1, wherein the first and second phase sweep frequency signals phase
2 sweep the signals $s_1(a)$ and $s_1(b)$ in a same direction.

1 10. The method of claim 9, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is identical to a second phase sweep frequency associated
3 with the second phase sweep frequency signal.

1 11. The method of claim 9, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is not identical to a second phase sweep frequency
3 associated with the second phase sweep frequency signal.

1 12. The method of claim 1 comprising the additional step of:
2 amplifying the phase swept signals $s_1(a)$ and $s_1(b)$.

1 13. The method of claim 1 comprising the additional step of:
2 transmitting the phase swept signals $s_1(a)$ and $s_1(b)$ over a pair of diversity
3 antennas.

1 14. A method of signal transmission comprising the steps of:
2 splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 includes a
3 communication signal;
4 phase sweeping the signal $s_1(a)$ using a first phase sweep frequency signal to
5 produce a phase swept signal $s_1(a)$; and
6 phase sweeping the signal $s_1(b)$ using a second phase sweep frequency signal to
7 produce a phase swept signal $s_1(b)$, wherein the phase swept signal $s_1(a)$ has a different
8 phase from the phase swept signal $s_1(b)$.

1 15. The method of claim 14, wherein the first phase sweep frequency signal phase sweeps the
2 signal $s_1(a)$ in a direction opposite to a direction the second phase sweep frequency signal
3 phase sweeps the signal $s_1(b)$.

1 16. The method of claim 15, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is identical to a second phase sweep frequency associated
3 with the second phase sweep frequency signal.

1 17. The method of claim 15, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is not identical to a second phase sweep frequency
3 associated with the second phase sweep frequency signal.

1 18. The method of claim 15, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is a fixed or a variable phase shifting rate.

1 19. The method of claim 15, wherein a second phase sweep frequency associated with the
2 second phase sweep frequency signal is a fixed or variable phase shifting rate.

1 20. The method of claim 14, wherein the first and second phase sweep frequency signals
2 phase sweep the signals $s_1(a)$ and $s_1(b)$ in a same direction.

1 21. The method of claim 20, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is identical to a second phase sweep frequency associated
3 with the second phase sweep frequency signal.

1 22. The method of claim 20, wherein a first phase sweep frequency associated with the first
2 phase sweep frequency signal is not identical to a second phase sweep frequency
3 associated with the second phase sweep frequency signal.

1 23. The method of claim 14 comprising the additional step of:
2 amplifying the phase swept signals $s_1(a)$ and $s_1(b)$.